CLAIMS

What is claimed is:

1. A storage rack system comprising:

a post having a plurality of openings;

a beam member having a beam flange with an inner side and an outer side, a headed lug protruding from the inner side of the beam flange, the headed lug disposable in a corresponding opening of the post to connect the beam member to the post;

a locking pin opening in the beam flange, the locking pin opening aligned at least partially with one of the plurality of openings of the post when the beam member is connected to the post;

a latch coupled to the beam flange, the latch having a resilient arm with a locking pin extending therefrom, the resilient arm biasing the locking pin to protrude through the locking pin opening of the beam flange and at least partially into an opening of the post aligned with the locking pin opening when the beam member is connected to the post;

a locking flange extending generally radially from the locking pin, the locking flange engageable with the inner side of the beam flange to inhibit withdrawal of the locking pin from the locking pin opening.

2. The system of Claim 1, the beam flange having a flange recess on the inner side thereof, the locking pin having an end portion extending away from the resilient arm, the locking flange extending generally radially from the end portion of the locking pin and adjacent the flange recess of the beam flange.

3. The system of Claim 2, the beam flange having first and second openings, one of the first and second openings is the locking pin opening.

4. The system of Claim 3, the latch having an assembly aperture therethrough and aligned at least partially with one of the first and second openings.

5. The system of Claim 2, the locking flange is a lobe extending from a side of the locking pin, a tooth protruding from the locking flange and extending toward the resilient arm, the beam flange having a tooth recess disposed in the flange recess, the tooth engageable with the tooth recess as the locking pin is withdrawn from the locking pin recess of the beam flange.

6. The system of Claim 5, the locking flange is angled toward the resilient arm.

7. The system of Claim 2, the locking flange is a lobe extending from a side of the locking pin, the headed lug includes a lug flange extending radially from a side portion thereof, the locking flange extends generally in the same direction as the lug flange.

8. The system of Claim 7, the beam flange having first and second openings disposed symmetrically thereon, one of the first and second openings is the locking pin opening, the flange recess is disposed between the first and second openings.

9. The system of Claim 8, each opening of the beam flange has an aperture portion located near the flange recess and a slot portion extending away from the flange recess, the slot portion is formed in a slot recess on the inner side of the beam flange.

10. The system of Claim 9 further comprising a tooth protruding from the locking flange and extending toward the resilient arm, the locking flange is angled toward the resilient arm, the beam flange having a tooth recess disposed in the flange recess, the tooth engageable with the tooth recess as the locking pin is withdrawn from the locking pin recess of the beam flange.

11. The system of Claim 9, the resilient arm has a first end portion with first and second legs protruding therefrom, each leg has a wing member extending outwardly away from the wing member of the other leg, the legs of the resilient arm are slidable into the slot portion of one of the openings and the wing members are disposed in the slot recess thereof to fasten the latch to the beam member.

12. The system of Claim 1, the latch having protrusions extending from a side thereof adjacent the beam flange to form a gap between the latch and the beam flange.

13. The system of Claim 2, the locking flange comprises first and second lobes extending from opposing sides of the locking pin.

14. The system of Claim 13, the beam flange having first and second openings disposed thereon, each opening of the beam flange has an aperture portion and a slot portion, the slot portion is formed in a slot recess formed on the inner side of the beam flange, the slot portion of one opening is adjacent the aperture portion of the other opening, one of the openings is the locking pin opening and the slot recess thereof is the flange recess.

15. A latch useable for locking a beam member connected to a post with a headed lug, the beam member having a beam flange with a locking pin opening aligned at least partially with an opening of the post when the beam member is connected thereto, the latch comprising:

a resilient arm having first and second end portions, the first end portion of the resilient arm coupleable to the beam flange;

a locking pin having an end portion extending from the second end portion of the resilient arm,

the resilient arm biasing the locking pin to protrude through the locking pin opening of the beam flange when the resilient arm is coupled thereto so that the locking pin protrudes at least partially into the opening of the post aligned with the locking pin opening of the beam flange when the beam member is connected to the post;

a locking flange extending generally radially from the end portion of the locking pin, the locking flange engageable with an inner side of the beam flange to inhibit withdrawal of the locking pin from the locking pin opening.

16. The latch of Claim 15, the locking flange is a single lobe extending radially from a side portion of the locking pin.

17. The latch of Claim 16, the locking flange is angled toward the resilient arm, a tooth protrudes from the locking flange toward the resilient arm, the tooth extends toward the locking pin.

18. The latch of Claim 15, the locking flange comprises first and second lobes extending from opposing sides of the locking pin.

19. The latch of Claim 15, the resilient arm having first and second legs protruding from the first end portion thereof, each leg has a wing member extending outwardly away from the wing member of the other leg and generally parallel to the resilient arm.

20. The latch of Claim 15 further comprising protrusions extending from the same side thereof as the locking pin.